

*noting*

- a) that the Constitution recognizes the sovereign right of each State to regulate its telecommunications;
- b) that the International Telecommunication Regulations "recognize the right of any Member, subject to national law and should it decide to do so, to require that administrations and private operating agencies, which operate in its territory and provide an international telecommunication service to the public, be authorized by that Member", and specifies that "within the framework of the present Regulations, the provision and operation of international telecommunication services in each relation is pursuant to mutual agreement between administrations";
- c) that Article 24 of the Radio Regulations specifies the authorities for licensing the operation of stations within any given territory;
- d) the right of each Member to decide on its participation in these systems, and the obligations for entities and organizations providing international or national telecommunication services by means of these systems to comply with the legal, financial and regulatory requirements of the administrations in whose territory these services are authorized,

*resolves*

that administrations licensing global satellite systems and stations intended to provide public personal communications by means of fixed, mobile or transportable terminals shall ensure, when licensing these systems and stations, that they can be operated only from the territory or territories of administrations having authorized such service and stations in compliance with Articles 23 and 24 of the Radio Regulations, in particular No. 2020,

*urges administrations and other members of the Sectors*

to participate in the first World Telecommunication Policy Forum dealing with global satellite systems for personal communications,

*invites administrations*

to cooperate with worldwide satellite system operators in establishing mutually beneficial arrangements for the provision of service within their territories,

*reminds operators of such systems*

to take account, when contracting agreements on the operation of their systems from the territory of a country, of any potential loss of revenue that the country may suffer from a possible reduction of its international traffic existing at the time such agreements are executed.

RESOLUTION PLEN-4

**USE OF THE BANDS 19.3 - 19.7 GHz AND 29.1 - 29.5 GHz  
BY FEEDER LINKS FOR NON-GSO MSS NETWORKS**

The World Radiocommunication Conference (Geneva, 1995),

*considering*

- a) that CPM-95 noted that FSS frequency bands to be used by feeder links for non-GSO MSS networks would be exempt from the application of No. 2613 and would be subject to a coordination procedure such as Resolution 46;
- b) that WRC-95 revised Resolution 46 and adopted the provision of Article S9.11bis for application in the frequency bands identified for use by feeder links for non-GSO MSS networks;
- c) that WRC-95 decided that Resolution 46 (Rev.WRC-95) will come into effect on 18 November 1995;
- d) that WRC-95 decided to remove the application of No. 2613 and simultaneously apply Resolution 46 (Rev.WRC-95) in the bands 19.3 - 19.6 GHz and 29.1 - 29.4 GHz;
- e) that WRC-95 also discussed the possibility of removing the application of No. 2613 and applying Resolution 46 (Rev.WRC-95) in the immediately adjacent bands 19.6 - 19.7 GHz (space-to-Earth) and 29.4 - 29.5 GHz (Earth-to-space) but concluded that further study by the ITU-R was required before such a decision could be made;
- f) that WRC-95 allocated the band 19.3 - 19.6 GHz to the FSS in the Earth-to-space direction for use limited to feeder links for non-GSO MSS networks;
- g) that Resolution [COM5-7] invited the ITU-R to undertake studies on sharing between feeder links of non-GSO MSS networks and GSO FSS networks;
- h) that Resolution [COM5-1] invites the ITU-R to undertake studies on sharing between feeder links of non-GSO MSS networks and the fixed service,

*resolves*

- 1 that as of 18 November 1995, Resolution 46 (Rev.WRC-95) shall be applied in the bands 19.3 - 19.6 GHz and 29.1 - 29.4 GHz;
- 2 that as of 18 November 1995, No. 2613 of the Radio Regulations shall not apply to feeder links of non-GSO MSS networks with respect to GSO FSS networks in the bands 19.3 - 19.6 GHz and 29.1 - 29.4 GHz except the case mentioned in *resolves* 4;

3 that WRC-97 should consider the removal of the application of No. 2613 of the Radio Regulations for feeder links of non-GSO MSS networks with respect to GSO FSS networks in the bands 19.6 - 19.7 GHz and 29.4 - 29.5 GHz taking into account the results of ITU-R studies, see Resolutions [COM5-1] and [COM5-7];

4 that in the bands 19.3 - 19.6 GHz and 29.1 - 29.4 GHz, No. 2613 of the Radio Regulations shall continue to apply between feeder links of non-GSO MSS networks and GSO FSS networks for which complete AP/3 coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995,

*urges administrations*

to note that WRC-97 will consider the removal of the application of No. 2613 of the Radio Regulations and subsequent application of Resolution 46 (Rev. WRC-95) in the bands 19.6 - 19.7 GHz and 29.4 - 29.5 GHz for coordination between GSO FSS networks and feeder links for non-GSO MSS networks.

RESOLUTION PLEN-5

**INTER-SATELLITE LINKS BETWEEN 50 AND 70 GHz**

The World Radiocommunication Conference (Geneva, 1995),

*considering*

- a) that the band 54.25 - 58.2 GHz is allocated on a primary basis to the inter-satellite and Earth exploration-satellite (passive) services;
- b) that this band is an oxygen absorption band essential for meteorological observations;
- c) that it is absolutely necessary to protect the application referred to in *considering* b) and that this is incompatible with the implementation of a large number of inter-satellite links,

*noting*

- a) that the recommended agenda of the 1997 World Radiocommunication Conference (WRC-97) includes an item 1.9.4.3 for consideration of the existing frequency allocations near 60 GHz and if necessary their reallocation, with a view to protecting the Earth exploration-satellite (passive) service systems operating in the only oxygen absorption frequency range from about 50 GHz to about 70 GHz;
- b) that consideration of this item by WRC-97 could result in the allocation of a different band to the inter-satellite service,

*resolves*

to urge administrations to refrain from implementing inter-satellite links in the band 54.25 - 58.2 GHz pending a decision on the matter by WRC-97,

*instructs ITU-R*

to carry out the necessary studies to identify the bands most suitable for the inter-satellite service in order to enable WRC-97 to make appropriate allocations to that service.

RESOLUTION PLEN-6

**PROVISIONS APPLICABLE TO THE FREQUENCY ASSIGNMENTS  
IN THE NON-PLANNED BANDS BELOW 28 000 kHz**

The World Radiocommunication Conference (Geneva, 1995),

*considering*

- a) that the provisions relating to the notification, examination and recording of the frequency assignments in the bands below 28 000 kHz were modified by this Conference, by suppressing, *inter alia*, provisions Nos. 1241-1245 of the Radio Regulations relating to the examination of the probability of harmful interference and the related re-submission and inquiry procedures for the frequency assignments in the bands that are not subject to Plans (provisions Nos. 1252-1265, 1269-1273, 1305-1308 and 1416-1420 of the Radio Regulations);
- b) that the application of the above procedures are time-consuming and require manpower resources that may be more efficiently used for other tasks;
- c) that the application of the simplified Radio Regulations would lead to the review of all assignments recorded in the Master Register, in particular those which will be examined under the above provisions prior to the entry into force of the simplified Radio Regulations,

*resolves*

that, with effect from 18 November 1995, the Bureau shall not examine with respect to Nos. 1241-1245 of the Radio Regulations, and shall not apply the related provisions to, frequency assignment notices in the non-planned bands below 28 000 kHz, including those received prior to 18 November 1995 and whose treatment was not completed by that date, and shall enter a remark in the Master Register for each assignment treated under this Resolution.

RESOLUTION PLEN-7

**IMPLEMENTATION OF RESOLUTION 46 (REV.WRC-95)**

The World Radiocommunication Conference (Geneva, 1995),

*considering*

- a) that this Conference has modified Resolution 46;
- b) that the revised version of Resolution 46 is referred to in several footnotes to the Table of Frequency Allocations of the Radio Regulations that have been modified by this Conference;
- c) that these footnotes shall apply provisionally only as from 1 January 1997;
- d) that some administrations have expressed the wish to start the coordination procedure contained in Resolution 46 (Rev.WRC-95) as soon as possible following this Conference,

*considering further*

that some administrations have already submitted information on projected networks,

*instructs the Bureau*

to apply, as of 18 November 1995, the provisions of Resolution 46 (Rev.WRC-95) to those bands in which the Resolution is mentioned.

RESOLUTION GT PLEN-1

**REVIEW OF APPENDICES 30 AND 30A OF THE RADIO REGULATIONS**

The World Radiocommunication Conference (Geneva, 1995),

*considering*

- a) the objectives set out in Resolution 524;
- b) the institutional nature of the ITU, which is founded on an agreement between Member administrations;
- c) the treaty status of the Plans in Appendices 30 and 30A;
- d) the increasing number of applications under Article 4 for modifications to the Plans;
- e) the need to provide guidance to the Radiocommunication Bureau in order to preserve the integrity of the Plans until the 1997 World Radiocommunication Conference (WRC-97),

*resolves*

that WRC-97, in revising Appendices 30 and 30A, may take into account the results of the studies considered by this Conference and contained in the report set out in annex hereto to WRC-97 on review and revision of Appendices 30 and 30A of the Radio Regulations,

*urges Members of the ITU*

to consider that report and actively participate in the planning exercises referred to in section 5.4,

*instructs ITU-R*

to take appropriate actions based on the matters contained in the report, particularly in respect of section 5.

ANNEX

(to Resolution GT PLEN-1)

REPORT OF THE 1995 WORLD RADIOCOMMUNICATION CONFERENCE  
TO THE 1997 WORLD RADIOCOMMUNICATION CONFERENCE ON  
REVIEW AND REVISION OF APPENDICES 30 AND  
30A OF THE RADIO REGULATIONS

(RESOLUTION 524 (WARC-92))

**1 Introduction**

In 1977 a frequency Plan was established by ITU which regulates the use of the BSS in the band 11.7 - 12.5 GHz (Region 1) and 11.7 - 12.2 GHz (Region 3). The Plan assigned, with a few exceptions, five channels to each country. The Plan was based on frequency modulation of the analogue TV systems PAL, SECAM, NTSC with one FM sound subcarrier. In accordance with the Radio Regulations (Appendix 30) other modulation systems are, however, not precluded "provided that the use of such characteristics does not cause greater interference than that caused by the system considered in the appropriate Regional Plan".

Appendix 30 of the Radio Regulations contains the regulatory provisions for the use of the 11.7 - 12.5 GHz frequency band by the broadcasting-satellite service in Regions 1 and 3, known as the WARC-77 Plan, and other services occupying the planned bands in all three Regions. The main provisions of this Appendix are:

- the list of assignments, as contained in the columns of the Plan, with their detailed characteristics for each country (channel number, polarization, satellite orbital location, beam boresight, size and orientation, satellite e.i.r.p., earth station test points, reference interference situation). The Plan is updated regularly by the BR. Its initial version (in 1977) is included in Article 11 of Appendix 30;
- the technical criteria on which the Plan has been established (i.e. C/N objectives, satellite and earth station antenna radiation patterns, protection ratios, etc.). These **technical criteria** are provided in Annex 5 to Appendix 30;
- the procedure for modification of the Plan. This **procedure** is provided in Article 4 of Appendix 30 and also includes technical provisions, the most important of which are given in Annexes 1 and 7 of Appendix 30.

In 1988 the Plans were completed by the addition of Appendix 30A which delineates the feeder-link assignments associated with the downlinks in Appendix 30. New procedures to regulate the use of these feeder links were developed, including some variations to the concepts contained in Appendix 30.

Decisions to revise the Plans may lead to modifications to these Plans, the technical criteria and the procedures.

The agenda of WRC-95 included the following item:

"3 to consider the following items, taking into account the work carried out by the study groups and the Conference Preparatory Meeting of the Radiocommunication Sector, with a view to taking action, as appropriate:



- a) Appendices 30 and 30A for Regions 1 and 3 in response to Resolution 524 (WARC-92), and taking particular account of *resolves* 2 of that Resolution and with due regard to the advantage of taking into account, where practicable, the orbital arcs of Appendix 30B;"

In addressing this agenda item, WRC-95 discussed many aspects of the possible revision of the Plan and contributions to the subject from members. As required by the agenda, WRC-95 also took into account the work of ITU-R as given in the Report of the Conference Preparatory Meeting. The Radiocommunication Bureau also contributed a report on its experience in administering the Plan.

It was considered desirable to fully discuss some of the issues which will need to be resolved during WRC-97 and convey the outcome of those deliberations in this Report, to enable the results of consensus and agreements reached to be available as guidance for the preparatory work for WRC-97 by the Radiocommunication Sector and administrations.

To enable WRC-97 to revise Appendices 30 and 30A, WRC-95 adopted and included in this report a set of material required for ITU-R, and in particular the Bureau, for the work to be carried out. This material may also serve as a guide to administrations when preparing their proposals to WRC-97. It consists of planning principles, planning parameters, considerations on the current procedures and instructions to ITU-R. In developing this material, due account was taken of Resolution 524.

As indicated in Resolution 524, revision of Appendices 30 and 30A shall include requirements for new countries. The Bureau indicated in its report to WRC-95 (attached hereto) the difficulties it encountered in dealing with requirements it received from new countries. Taking account of the limited resources of the Bureau, requirements of new countries shall be considered within the revision of Appendices 30 and 30A.

## 2 Planning principles

Several administrations submitted proposals for principles to be adopted for the WRC-97 review of the Plans. These were discussed by WRC-95 and adopted as a basis for the preparatory work of the Radiocommunication Sector and to guide the preparations of administrations for WRC-97.

The revision of Appendices 30 and 30A should be based on the following principles.

2.1 There is agreement that the revision of the Plans should, as a minimum:

2.1.1 use the revised planning parameters adopted in Recommendation [GT PLEN-A];

2.1.2 provide for new countries, and those countries having less than the minimum number of channels assigned by the 1977 BSS Conference (for example, in Region 1 this was five channels, if available, in the specific orbital location), an initial capacity equivalent to that which would have been provided to them using the principles adopted at the 1977 BSS Conference.

2.1.3 be based on national coverage;

2.1.4 protect, on the basis of the criteria set forth in Appendix 30 (respectively 30A), the assignments which are in conformity with Appendix 30 (respectively 30A), and have been notified under paragraph 5.1 of Article 5 of Appendix 30 (respectively 30A) and for which the entry into service has been confirmed to the Bureau under paragraph 5.2.8 of Appendix 30 (respectively 30A); and protect, on the basis of the planning parameters contained in Recommendation [GT PLEN-A] and, as far as possible, on the basis of the criteria set forth in Appendix 30 (respectively 30A), the assignments which are in conformity with Appendix 30 (respectively 30A) and have been notified under paragraph 5.1 of Article 5 of Appendix 30 (respectively 30A);

2.1.5 in order to avoid the obsolescence of the Plans, caused by technical assumptions becoming out of date, ensure that the plan is established with a view to achieving long-term flexibility;

2.1.6 taking account of the increased requirements of subregional systems, avoid a high fill factor of the band in order to facilitate the development (in a balanced way among the Regions) of multi-administrations and subregional systems through the application of procedures associated with the Plan;

2.1.7 take account, as far as possible, of systems which have been communicated to the Bureau under Article 4 of Appendices 30 and 30A.

2.2 To the extent possible, the revision of the Plans and associated procedures should facilitate:

2.2.1 a channel capacity large enough to permit the economical development of a broadcasting-satellite system;

2.2.2 utilization of existing orbital locations, except for those administrations wishing alternative ones. Where necessary in the revision, in some segments of the orbital arc, it may be desirable to use an orbital spacing other than the nominal spacing, without increasing the amount of assigned orbital locations and without affecting other assignments in the Plans;

2.2.3 the establishment of procedures associated with the Plans which would allow administrations, under conditions to be specified, to use their entry(ies) in the Plan for the fixed-satellite service;

2.2.4 considering, for planning, the appropriateness of a complete digital approach in the future and, if so, providing for the simultaneous operation of analogue and digital systems, if necessary during a defined time-scale.

2.3 The planning shall maintain the integrity of the Region 2 Plan in accordance with the provisions of *resolves* 2 of Resolution 524.

2.4 Compatibility shall be ensured between the broadcasting-satellite service in Regions 1 and 3 and those services having allocations in the planned bands in all three Regions.

### 3 Planning parameters

WRC-95 decided to adopt revised technical planning parameters recommended by the CPM and supported in the proposals of administrations, in Recommendation [GT PLEN-A] which recommends:

- 1) that the following technical parameters be adopted in preparation for WRC-97 actions on the revision of Appendices 30 and 30A:

- 1.1) e.i.r.p. planning values: a general reduction of 5 dB from the levels listed in Appendix 30;
- 1.2) use of an improved receive earth station reference antenna pattern based on Recommendation ITU-R BO.1213;
- 1.3) simultaneous planning of feeder links and downlinks, with calculation of overall equivalent protection margins;
- 1.4) aggregate C/I ratio values of:
  - co-channel 23 dB with no single-entry C/I lower than 28 dB;
  - adjacent channel 15 dB;
- 2) that these updated parameters be applied to possible revisions to assignments not operating or notified; operating or notified systems, to the extent they are in accordance with Appendices 30 and 30A, will only be adjusted if the administrations concerned agree;
- 3) that the general e.i.r.p. reduction in 1.1) above be applied, but for countries in high rainfall climate zones adequate e.i.r.p. levels will be maintained.

#### **4 Procedural matters requiring preparatory work and consideration by WRC-97**

##### **4.1 Modification procedures**

A number of contributions recognized the desirability of improving the procedures for modification of the Plans. It is considered that further study is needed by the Radiocommunication Sector, taking into account the studies of the VGE and the study groups. Additionally, in its report to the Conference, the Bureau identified a number of matters where procedures could be improved to ensure more efficient and effective processing of applications. Some specific items were identified for consideration.

**4.1.1** It might be necessary to discourage modifications to the Plan which are not intended to be brought into use.

Further studies need to be carried out to suitably review the modification procedures contained in Article 4 of Appendices 30 and 30A (see Recommendation [COM4-B]).

##### **4.2 Relationship with Appendix 30B**

The potential for aligning BSS assignments with the orbital positions and their predetermined arcs of Appendix 30B has been studied. It was found that, if applied systematically, this will complicate any planning exercise. It may, however, be feasible in some cases to take commonality in an orbital arc into account in revising the Plans taking into account Section 2.2.2 above.

#### **4.3 Matters relating to the application of No. 2674**

**4.3.1** No. 2674 states: "In devising the characteristics of a space station in the broadcasting-satellite service, all technical means available shall be used to reduce, to the maximum extent practicable, the radiation over the territory of other countries unless an agreement has been previously reached with such countries".

It is a general provision applicable to all BSS bands, planned and unplanned, in all three Regions. The interpretation and application of No. 2674 by the BR is explained in the Rules of Procedure for Article 30 of the Radio Regulations which were adopted in December 1994 without objection from administrations.

**4.3.2** In its Document 21, the Bureau referred to the need to bring in line the English and the French wording of No. 2674; this may be indicated to WRC-97 and the preparation of a revised text should be dealt with in the framework of the preparation of WRC-97.

**4.3.3** The agreement referred to in No. 2674 is not covered by Article 4 of Appendices 30 and 30A. No existing procedure is indicated for its application. Should such a procedure be developed, it should first allow the identification of the administrations whose agreement is required, and then indicate any steps that should be applied in this specific case.

**4.3.4** It may be difficult for the Board to adopt criteria permitting the Bureau to evaluate the extent to which the available technical means have been used to reduce the radiation over the territory of another administration. For the purpose of the application of No. 2674, the administration communicating a satellite network should indicate the service area in terms of territories of another administration (or test points), as indicated under item 6 of Annex 2 of Appendix 30.

**4.3.5** Recognizing that the agreement under No. 2674 and the agreement required in Article 4 of Appendices 30 and 30A are separate agreements, the agreement under No. 2674 be sought directly from the administration concerned or through the Bureau; in this latter case, the agreement under No. 2674 should be sought through the publication required under Article 4 of Appendices 30 and 30A. In case of no comment being received by the Bureau within a determined period, the non-commenting administration is considered as not having a major objection. In the case of a disagreement, and if the administrations concerned cannot reach an agreement, the Bureau shall modify the service area to exclude the territory of the objecting administration. In either case, the administration initiating the project is entitled to bring into use the modification after successful completion of Article 4 of Appendices 30 and 30A procedures.

**4.3.6** When a subregional system is communicated to the Bureau by an intergovernmental organization referred to in No. 261 of the ITU Convention (Geneva, 1992), in accordance with its internal rules, it shall be deemed that the members of that organization have given their agreement under No. 2674.

#### **4.4 Subregional systems**

WRC-95 considered the desirability of facilitating the development of subregional and multinational systems in the procedures of Appendices 30 and 30A.

It noted there are a number of such systems being proposed to the Bureau for which the existing procedures may not be adequate.

Guidance for development of suitable procedures can be found in Resolution 42 and Appendix 30B (see 5.1.8). It is desirable that studies be undertaken to provide advice to WRC-97.

#### **4.5 Alignment of Appendices 30 and 30A**

There are inclusions in the Articles of Appendix 30A adopted at WARC-88 which differ from those in Appendix 30. It would be desirable for these to be brought into alignment as far as possible. The Radiocommunication Sector is requested to study the provisions of the two sets of procedures and suggest appropriate adjustment.

### **5 Advice and instructions to ITU-R**

#### **5.1 Matters of which WRC-95 takes note**

WRC-95 takes note of the following issues appearing in Section 2.6 of the Radiocommunication Bureau's Report to WRC-95 (attached hereto):

**5.1.1** Introduction, networks submitted to the Bureau, publications and protection margins report (Sections 2.6.1 and 2.6.2.1).

**5.1.2** Applicability of the group concept (Section 2.6.3.1).

**5.1.3** Resolution 42 (Rev.Orb-88) (Section 2.6.3.3).

**5.1.4** Reference protection margin for the BSS Plan of Regions 1 and 3 (Section 2.6.3.5).

**5.1.5** Station-keeping (Section 2.6.4.2).

**5.1.6** Extension of the date of bringing into use (Section 2.6.3.7).

**5.1.7** Shaped beams (Section 2.6.6.3).

**5.1.8** Experience of the Bureau in applying Appendix 30B (Section 2.6.7).

#### **5.2 Matters for which WRC-95 considers that further studies are required to be carried out by ITU-R with the results to be available by CPM-97 at the latest**

**5.2.1** Frequency assignments in the guardbands of the Plans (Section 2.6.3.4 of the Bureau's Report to WRC-95).

**5.2.2** Power control (Section 2.6.3.8).

**5.2.3** Very low equivalent protection margins (Section 2.6.6.1).

- 5.2.4 Coordination area around a feeder-link transmitting earth station (Section 2.6.6.4).
- 5.2.5 Rain climatic zones in Appendices 30 and 30A (Section 2.6.6.5).
- 5.2.6 Linear polarization and digital transmission (Section 2.6.4.1).
- 5.2.7 Time difference in the conclusion of the Article 4 procedure by different networks (Section 2.6.6.2).
- 5.2.8 Coexistence of analogue and digital systems.
- 5.2.9 Non-uniform spacing.
- 5.2.10 Members with unified/divided territories.
- 5.2.11 Transmit earth station antenna.
- 5.2.12 Energy dispersal.
- 5.2.13 Subregional systems (see Section 4.4 above).
- 5.2.14 Compatibility between the broadcasting-satellite service and the fixed-satellite service in the BSS planned bands (see Section 2.2.3 above).
- 5.2.15 Emissions overlapping guardbands (Section 2.6.4.3).
- 5.2.16 Service area contours and steerable beams (Section 2.6.6.6).

### **5.3 Rules of Procedure**

#### **5.3.1 Agreements under No. 2674 (Section 2.6.3.6 of the Bureau's Report to WRC-95)**

WRC-95 instructs the RRB to modify the Rules of Procedure for No. 2674, for Regions 1 and 3 as described in Section 4.3 above.

#### **5.3.2 Application of Appendices 30 and 30A to new ITU Members (Section 2.6.5 of the Bureau's Report to WRC-95)**

This Conference confirms the Bureau's action to treat submissions under Article 4 of Appendices 30 and 30A by new ITU Members as follows:

that when countries become new ITU Members, they may apply the modification procedures of Appendices 30 and 30A to suitably modify the Plans in order to accommodate their requirements.

#### **5.3.3 Former assignments not reflecting current administrative and geographical situation**

In cases where the Bureau identifies a new case of excess of interference into an assignment to an administration in the Plan which has administratively or geographically changed with respect to its situation at the time of the conferences, the Bureau will have to include in the list of affected administrations the name(s) of the new Member(s) in the territory of which the affected test point(s) is (are) located.

Then, if the administration of one of these new Members has the intention to ask for the use of the former assignments, as mentioned above, during WRC-97, it may have the opportunity to send unfavourable comments to the administration responsible for the submission under Article 4 of Appendices 30 and 30A before the end of the four-month period specified therein.

**5.3.4 General remarks on the submitted data. Non-standard parameters (Sections 2.6.2.2 and 2.6.3.2 of the Bureau's Report to WRC-95)**

WRC-95 instructs the Bureau to identify the systems still under Article 4 of Appendices 30 and 30A, including those using parameters different from those on the basis of which the current Plans were developed, in order to include a Note in the relevant publications.

This Note is intended to indicate that if the proposed system has not successfully completed the Article 4 procedures by WRC-97, WRC-97 will take account as far as possible of its parameters (see Section 2.1.7 above); otherwise, if this is not possible, the administration responsible for this system may either revise its parameters, at WRC-97, so as to be compatible with the revised Regions 1 and 3 Plan, or maintain the modification and continue coordination under the modification procedures adopted by WRC-97, as of their entry into force.

**5.3.5 Overall equivalent protection margins (OEPM) (Addendum 1 of the Bureau's Report to WRC-95)**

The Bureau shall develop calculation methods on the basis of existing ITU-R Recommendations or any material at its disposal, and circulate them for comment by administrations.

Pending subsequent decision by WRC-97, WRC-95 instructs the Bureau and ITU-R, in calculating the OEPM for Regions 1 and 3 Plan to be developed, to use the OEPM algorithm appearing in Section 1.14 of Annex 5 of Appendix 30 and Section 1.12 of Annex 3 of Appendix 30A for the Region 2 analysis, as properly modified to calculate the overall margins for co-channel, first lower adjacent and first upper adjacent channels. The above-mentioned margins will be then combined using the equations appearing in the above-mentioned sections in order to obtain the OEPM reference situation to be used in the planning exercises to be carried out by ITU-R, together with the additional technical criteria referred to in Recommendation [GT PLEN-A].

#### **5.4 Planning exercises**

The Bureau, in cooperation with administrations and the study groups and on the basis of the planning principles contained in Section 2 above, is instructed to conduct planning exercises as follows and report the results of its work for the Conference Preparatory Meeting.

Step 1: Modify the existing Plan assignments on the basis of the new parameters contained in Recommendation [GT PLEN-A].

In this and subsequent steps the Bureau should protect, on the basis of the criteria set forth in Appendix 30 (respectively 30A), assignments which are in conformity with Appendix 30 (respectively 30A), and have been notified under paragraph 5.1 of Article 5 of Appendix 30 (respectively 30A) and for which the entry into service has been confirmed to the Bureau under paragraph 5.2.8 of Appendix 30 (respectively 30A); and protect, on the basis of the planning parameters contained in Recommendation [GT PLEN-A] and, as far as possible, on the basis of the criteria set forth in Appendix 30 (respectively 30A), assignments which are in conformity with Appendix 30 (respectively 30A) and have been notified under paragraph 5.1 of Article 5 of Appendix 30 (respectively 30A).

Step 2: Provide for new countries, and those countries having less than the minimum number of channels, an initial capacity equivalent to that which would have been provided to them by the principles adopted for the 1977 BSS Conference.

To conduct this step, it will be necessary for the Bureau to consult with the administrations concerned to establish their test points and new beam requirements. Assignments in the Plans to former Members may be utilized, as appropriate in accommodating the requirements.

Step 3: Take account, as far as possible, of systems which have been communicated to the Bureau under Article 4 of Appendices 30 and 30A.



## RESOLUTION GT PLEN-2

### HF BROADCASTING

The World Radiocommunication Conference (Geneva, 1995),

*noting*

- a) its agenda item relating to "the availability of the newly allocated HFBC bands";
- b) that the World Administrative Radio Conference (Geneva, 1979) (WARC-79) allocated the HF bands listed in No. 531 of the Radio Regulations to the broadcasting service and, by its Resolution 8(Rev.Mob-87) took action for the transfer of existing fixed stations to other bands;
- c) that, by its Resolution 512, the World Administrative Radio Conference for the Planning of the HF Bands Allocated to the Broadcasting Service (Geneva, 1987) (WARC-HFBC-87) reviewed the dates of implementation of the changes of the frequency allocations in the bands referred to in No. 531 of the Radio Regulations;
- d) that the World Administrative Radio Conference (Malaga-Torremolinos, 1992) (WARC-92), in allocating additional HF bands to the broadcasting service, as listed in No. 521A of the Radio Regulations, limited their use to single-sideband transmissions, and, by its Resolution 21 (WARC-92), took action for the transfer of existing fixed-service stations to other bands, and that the transfer is in progress;
- e) that, by its Resolution 22, WARC-92 requested the Telecommunication Development Bureau (BDT) to consider as a matter of priority the introduction of specific modifications in the radiocommunication networks of the developing countries, coordinating the necessary technical advisory activities with the IFRB and the CCIR;
- f) that WARC-79, in its Resolution 508, WARC-HFBC-87, in its Resolution 511, and WARC-92, in its Resolution 523, recommended the convening of a world radiocommunication conference for the planning of the HF bands allocated to the broadcasting service;
- g) that Resolution 20 of the Plenipotentiary Conference (Kyoto, 1994) stipulated that broadcasting in the bands referred to above shall not be operated until planning is completed and the conditions stipulated in the Radio Regulations are fulfilled;
- h) that WARC-HFBC-87 adopted a revised Article 17, together with Resolution 515, containing planning principles, a planning system and a consultation procedure, and, by its Resolution 511 instructed the IFRB to undertake the improvements in the software of the HFBC planning system, to test the system and to submit their results to administrations and to the recommended future HFBC planning conference;
- i) that WARC-92 considered the IFRB report on the above improvements and tests and, in its Resolution 523, instructed the IFRB to propose a flexible, simplified planning method, which could be used for the subsequent development of a planning system,

*considering*

- a) that the IFRB reports on the tests and improvements requested by the successive world administrative radio conferences concluded that, even with the additional allocations, a planning method based on all the requirements of administrations could not be developed and implemented in an economical way;
- b) that the HF bands allocated by WARC-92 to the broadcasting service are allocated to other services on a primary basis until 1 April 2007 under the provisions of Nos. **521C**, **528A**, **529B** and **534A** of the Radio Regulations;
- c) that *resolves* 2 of Resolution **517** (HFBC-87) specifies that "the final date for the cessation of DSB emissions specified in the Annex to this Resolution shall be periodically reviewed by competent future world administrative radio conferences in the light of the latest available complete statistics on the worldwide distribution of SSB transmitters and synchronous demodulator receivers, and that at least one such review shall be carried out before the year 2000";
- d) that the implementation of the timetable contained in the Annex to Resolution **517** (HFBC-87) may impose undue constraints on countries, in particular developing countries, discontinuing their double-sideband transmissions;
- e) that the 1993 Radiocommunication Assembly approved and assigned a Question to the Radiocommunication Sector entitled "Planning Procedures for HF Broadcasting" with a request to complete the studies by 1997, so that an alternative planning procedure might be adopted by 1997 World Radiocommunication Conference (WRC-97);
- f) that the work carried out by ITU-R Task Group 10/5 and the Conference Preparatory Meeting (CPM) is to be taken into account, with a view to WRC-97 taking action, on "availability of the newly allocated HFBC bands", in accordance with the agenda item of this Conference;
- g) that the Radiocommunication Sector is engaged in the development of a simple and flexible planning procedure based on the concept of coordination,

*also noting*

- a) that the Additional Plenipotentiary Conference (Geneva, 1992) adopted a new structure for the International Telecommunication Union, in which service conferences, such as HFBC conferences, are replaced by a periodical world radiocommunication conference convened every two years;
- b) that the preliminary agenda of the forthcoming WRC-97 set out in Resolution 2 (WRC-93) contains a set of items which includes the "examination of, and taking necessary decisions on, the question of the HF bands allocated to the broadcasting service in the light of developments to date and the results of the studies carried out by the Radiocommunication Sector",

*resolves*

- 1 that the HF bands allocated to the broadcasting service by WARC-79 may be used on an interim basis by that service from 1 January 1996, on the basis of the consultation procedure of Article 17, until new procedures are adopted by WRC-97 and taking into account the provisions of No. 531 of the Radio Regulations;
- 2 to invite WRC-97 to consider the new HFBC planning procedure being developed in the Radiocommunication Sector with a view to its adoption, and, if that procedure is adopted, to decide on a suitable date for its introduction, which should be the nearest possible date after the conclusion of that Conference;
- 3 to request ITU-R to carry out the following studies and to prepare a report for consideration by WRC-97:
  - 3.1 review the planning principles contained in Article 17 and continue to develop the new procedure to be applied to the HF bands allocated to the broadcasting service (except in the bands to be used in the Tropical Zone), taking into account the provisions of Nos. 1737, 1738 and 1739 of the Radio Regulations;
  - 3.2 devise means by which other primary services in the additional bands allocated by WARC-92 to the broadcasting service continue to be protected taking into account Nos. 521C, 528A, 529B and 534A of the Radio Regulations;
  - 3.3 recommend a date or dates by which other primary services in the above additional allocations will no longer be protected;
  - 3.4 recommend the criteria which may be used by the Radiocommunication Bureau for carrying out a test of the recommended procedure;
  - 3.5 consider a flexible timetable for the introduction of SSB transmissions incorporating a progressive increase in the parts of the HF bands allocated to the broadcasting service for use by SSB transmissions, so that countries in difficult economic situations can continue using their DSB transmitters;
- 4 that, taking into account the needs of the other primary services in the bands affected, WRC-97 consider bringing forward the date of availability of the HF bands allocated by WARC-92 to the broadcasting service,

*instructs the Director of the Radiocommunication Bureau*

- 1 to conduct tests based on the recommended criteria referred to in *resolves* 3.4 above and, if necessary, consult administrations on their requirements, and to report to WRC-97;
- 2 to make arrangements with the Director of the BDT for an information meeting to be held in application of Nos. 166 and 224 of the Convention (Geneva, 1992), before the last meeting of CPM-97, in order to inform developing countries of the results of the ITU-R studies.
- 3 to provide the necessary assistance to Task Group 10/5 in carrying out its task.

RESOLUTION GT PLEN-3

**AGENDA FOR THE 1997 WORLD RADIOCOMMUNICATION CONFERENCE**

The World Radiocommunication Conference (Geneva, 1995),

*considering*

- a) that in accordance with Nos. 118 and 126 of the Convention of the International Telecommunication Union (Geneva, 1992), and having regard to Resolution 1 of the Additional Plenipotentiary Conference (Geneva, 1992), the general scope of the agenda for a world radiocommunication conference should be established four years in advance and a final agenda shall be established two years before the conference;
- b) Resolution 3 of the Plenipotentiary Conference (Kyoto, 1994);
- c) the relevant resolutions and recommendations of previous world administrative radio conferences (WARC) and world radiocommunication conferences (WRC),

*recognizing*

that this Conference identified a number of urgent issues requiring further examination by the 1997 World Radiocommunication Conference (WRC-97),

*resolves*

to recommend to the Council that a world radiocommunication conference be held in Geneva in late 1997 for a period of four weeks, with the following agenda:

1 on the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, and taking account of the results of WRC-95, to consider and take appropriate action in respect of the following topics:

1.1 requests from administrations to delete their country footnotes or to have their country's name deleted from footnotes, if no longer required, within the limits of Resolution [COM4-1];

1.2 issues remaining from WRC-95 including consideration of the VGE Report in accordance with Resolution [COM4-3] and any essential changes to Articles S4, S7, S8, S9, S11, S13, S14 and Appendices S4 and S5 of the simplified Radio Regulations adopted by WRC-95 to ensure consistency between all of their provisions;

1.3 review of Appendix S7 [28] to the Radio Regulations, taking into account Resolution 60 (WARC-79), Resolution 712 (Rev.WRC-95) and Recommendation 711 (WARC-79);

1.4 examination of, and taking necessary decisions on, the question of the HF bands allocated to the broadcasting service in the light of developments to date and the results of the studies carried out by the Radiocommunication Sector, and review of Article 17 [S12] of the Radio Regulations in accordance with Resolution [COM4-2];

**1.5** based on the results of the studies to be carried out under Recommendation [GT PLEN-B], consider changes to the Radio Regulations, as appropriate;

**1.6** matters related to the maritime mobile and maritime mobile-satellite services:

**1.6.1** the provisions of Chapters IX [Appendix S13] and XIX [Chapter SVII] of the Radio Regulations, as stipulated in Resolution 331 (Mob-87), and appropriate action in respect of the issues dealt with in Resolutions 200 (Mob-87), 210 (Mob-87) and 330 (Mob-87), including maritime certification and licensing issues related to Chapter [SIX] of the Radio Regulations, taking into account that the global maritime distress and safety system (GMDSS) shall be fully implemented in 1999;

**1.6.2** the use of Appendix 18 [S18] to the Radio Regulations in respect of the VHF band for maritime mobile communications, and the use and extension of UHF channels contained in S5.287, taking into account Resolution 310 (Mob-87);

**1.6.3** Article 61 [S53] of the Radio Regulations relating to the order of priority of communications in the maritime mobile service and in the maritime mobile-satellite service;

**1.6.4** review, and if necessary, revision of the provisions related to the NAVTEX coordination in order to release ITU from the obligation to undertake operational coordination for this service operating on 490 kHz, 518 kHz and 4 209.5 kHz, in the light of the consultations undertaken with the International Maritime Organization (IMO) (see Resolution [COM4-7]);

**1.6.5** use of the new digital technology in the maritime radiotelephony channels;

**1.7** review of Appendix 8 to the Radio Regulations taking into account Recommendation 66 (Rev.WARC-92);

**1.8** the possible deletion of all secondary allocations from the band 136 - 137 MHz, which is allocated to the aeronautical mobile (R) service on a primary basis, in accordance with Resolution 408 (Mob-87) and in order to meet the special needs of the aeronautical mobile (R) service;

**1.9** taking into account the needs of other services to which the relevant frequency bands are already allocated:

**1.9.1** issues concerning existing and possible additional frequency allocations and regulatory aspects as related to the mobile-satellite and fixed-satellite services including consideration of WRC-95 Resolutions [PLEN-1], [COM5-4, COM5-5, COM5-6, COM5-7, COM5-8, COM5-9, COM5-11], [GT PLEN-6] and Recommendation 717 (Rev.WRC-95);

**1.9.2** Resolutions 211 (WARC-92), 710 (WARC-92) and Resolution 712 (Rev.WRC-95);

**1.9.3** Recommendation 621 (WARC-92);

**1.9.4** frequency allocation issues related to the needs of the Earth exploration-satellite service, which are not covered in the above-mentioned Resolutions, namely:

**1.9.4.1** allocation of frequency bands above 50 GHz to the Earth exploration-satellite (passive) service;

**1.9.4.2** frequency allocations near 26 GHz to the Earth exploration-satellite service (space-to-Earth);

**1.9.4.3** the existing frequency allocations near 60 GHz and, if necessary, their re-allocation, with a view to protecting the Earth exploration-satellite (passive) service systems operating in the unique oxygen absorption frequency range from about 50 GHz to about 70 GHz;

**1.9.5** allocations to the space research service (space-to-space) near 400 MHz;

**1.9.6** the identification of suitable frequency bands above 30 GHz for use by the fixed service for high-density applications;

**1.10** review of Appendices **30 [S30]** and **30A [S30A]** for Regions 1 and 3 in response to Resolution **524 (WARC-92)**, and taking particular account of *resolves* 2 of that Resolution, in accordance with Resolution [GT PLEN-1] and taking into account Recommendation [COM4-B];

**2** to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations which have been communicated by the associated Radiocommunication Assembly, in accordance with Resolution [COM4-5]; and decide whether or not to update the corresponding references in the Radio Regulations, in accordance with principles contained in the Annex to Resolution [COM4-4];

**3** to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the Conference;

**4** in accordance with Resolution **94 (WARC-92)**, to review those resolutions and recommendations of world administrative radio conferences and world radiocommunication conferences which are relevant to agenda items 1 and 2 above with a view to their possible revision, replacement or abrogation;

**5** to review, and take appropriate action on, the report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention (Geneva, 1992);

**6** to identify those items requiring urgent actions by the radiocommunication study groups in preparation for the 1999 World Radiocommunication Conference (WRC-99);

**7** to consider the final report of the Director of the Radiocommunication Bureau on activities related to Resolution 18 (Kyoto, 1994);

**8** in accordance with Article 7 of the Convention (Geneva, 1992):

**8.1** to consider and approve the report of the Director of the Radiocommunication Bureau on the activities of the Radiocommunication Sector since the last Conference;

**8.2** to recommend to the Council items for inclusion in the agenda for the WRC-99, and to give its views on the preliminary agenda for the 2001 Conference and on possible agenda items for future conferences,

*invites the Council*

to establish the agenda and make provision for WRC-97 and to initiate as soon as possible the necessary consultation with Members,

*instructs the Director of the Radiocommunication Bureau*

to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting and to prepare a report to WRC-97,

*instructs the Secretary-General*

to communicate this Resolution to concerned international and regional organizations.

RESOLUTION GT PLEN-4

**URGENT STUDIES REQUIRED IN PREPARATION FOR THE  
1997 WORLD RADIOCOMMUNICATION CONFERENCE**

The World Radiocommunication Conference (Geneva, 1995),

*considering*

- a) that the agenda of this Conference included consideration of items for the agendas for the 1997 World Radiocommunication Conference (WRC-97) and the 1999 World Radiocommunication Conference (WRC-99);
- b) that items for the agenda for 1997 have been identified in Resolution [GT PLEN-3];
- c) that the 1995 Radiocommunication Assembly established a Special Committee to Address the Review of Regulatory/Procedural Matters, *inter alia*, regulatory issues for WRC-97,

*noting*

the important progress in ITU-R studies relevant to the preliminary agenda for WRC-97,

*resolves*

- 1 that ITU-R Task Group 10/5 shall present a report on the progress of studies on Question ITU-R 212/10 to the 1996 Conference Preparatory Meeting (CPM-96);
- 2 that both the ITU-R Special Committee to Address the Review of Regulatory/Procedural Matters and ITU-R Task Group 10/5 shall complete the work identified in Resolution [GT PLEN-2] (WRC-95);
- 3 that ITU-R Working Party 10-11S shall present a report on the progress of studies on Question ITU-R 85-1/11 to CPM-96;
- 4 that both the ITU-R Special Committee to Address the Review of Regulatory/Procedural Matters and Working Party 10-11S shall complete the work identified in Resolution [GT PLEN-1];
- 5 that ITU-R shall complete studies on the topics identified in this Resolution and its Annex and report the results of those studies to CPM-97,

*instructs*

- 1 CPM-96 to take this Resolution into account when planning the work in preparation for WRC-97;
- 2 the Director of the Radiocommunication Bureau to bring this Resolution to the attention of the meeting of ITU-R study group Chairmen and Vice-Chairmen.



ANNEX TO RESOLUTION GT PLEN-4

**Urgent studies required in preparation for WRC-97**

- Sharing studies concerning the possible use of the band 1 675 - 1 710 MHz by the mobile-satellite service, in accordance with Resolution 213 (Rev.WRC-95).
- Issues dealing with allocations to space services, in accordance with Resolution 712 (Rev.WRC-95).
- Issues relating to frequency sharing between the mobile-satellite service and terrestrial services at frequencies below 3 GHz, in accordance with Recommendation 717 (Rev.WRC-95).
- Criteria to be applied for the non-GSO fixed-satellite service sharing situations listed in *considering further* of Resolution [PLEN-1].
- Sharing between the FSS and the FS in the 20 GHz band when used bidirectionally by the FSS to provide feeder links for non-geostationary satellite systems in the mobile-satellite service, in accordance with Resolution [COM5-1].
- Calculation of the power flux-density at the geostationary orbit in the 7 GHz band used for feeder links for non-geostationary systems of the mobile-satellite service in the space-to-Earth direction of transmission, in accordance with Resolution [COM5-2].
- Allocation of frequencies to the FSS in the band 15.4 - 15.7 GHz for use as feeder links for non-geostationary-satellite networks operating in the mobile-satellite service, in accordance with Resolution [COM5-4].
- Allocation of frequencies to the fixed-satellite service in the band 15.45 - 15.65 GHz (Earth-to-space) for use as feeder links for non-geostationary satellite networks operating in the mobile-satellite service, in accordance with Resolution [COM5-6].
- Development of interference criteria and methodologies for coordination between feeder links for non-GSO MSS networks and GSO FSS networks in the 20 GHz and 30 GHz bands, in accordance with Resolution [COM5-7].
- Power flux-density level applicable in frequency band 137 - 138 MHz shared by the mobile-satellite service and the terrestrial services, in accordance with Resolution [COM5-5].
- Determination of coordination areas between geostationary and non-geostationary feeder-link earth stations of different administrations operating in opposite directions of transmission, in accordance with Recommendation [COM5-C].
- Sharing studies concerning the use of the bands below 1 GHz by the non-GSO mobile-satellite service, in accordance with Resolution [COM5-8].